

Australian National Botanic Gardens



Growing Native Plants

No. 13



Contents of previous issues

The contents of Numbers 1–10 (previously called volumes) of *Growing Native Plants*, listing the titles of major articles, are set out below. An alphabetical list of the major articles in the first ten Numbers is included on the inside back cover.

A detailed index of Number 11 onwards is included in the back of this booklet.

Number 1

INTRODUCTION

Banksia spp.
Eriostemon myoporoides
Scented plants
Melaleuca wilsonii
Isopogon anemonifolius
Goodia lotifolia
Acacia drummondii
Ground covers
Indigofera australis
Grevillea baueri
Hypocalymma angustifolium
Boronia heterophylla
Melaleuca incana
Micromyrtus ciliata
Westringia fruticosa
Thryptomene calycina

Number 2

Propagation of native plants

Anigozanthos spp.
Calytrix tetragona
Olearia phlogopappa
Jacksonia scoparia
Calothamnus spp.
Lythrum salicaria
Callistemon citrinus
Hakea laurina
Sollya heterophylla
Acacia spectabilis
Grevillea dimorpha
Swainsona galegifolia
Helichrysum bracteatum
Leptospermum scoparium
var. *rotundifolium*
Astartea fascicularis

Number 3

Telopea mongaensis
Baeckea linifolia
Casuarina spp.
Agonis juniperina
Hakea sericea
Crowea exalata
Ceratopetalum gummiferum
Prostanthera lasianthos
Acacia triptera
Dianella spp.
Blandfordia nobilis
Bauera rubioides

Number 4

Native ground covers
Melaleuca micromera
Eucalyptus caesia
Boronia pinnata
Hakea verrucosa
Melaleuca thymifolia
Viminaria juncea
Cassinia quinquefaria

Number 5

Designing native plant gardens
Acacia vestita
Diplarrena moraea
Zieria cytisoides
Eucalyptus curtisii
Callistemon brachyandrus
Grevillea longifolia
Hakea propinqua

Number 6

Native conifers
Helmholtzia glaberrima
Brachysema lanceolatum
Grevillea × *gaudichaudii*
Parahebe perfoliata
Callistemon sieberi
Alphitonia excelsa
Cassia artemisioides
Alyogyne huegelii
Helipterum manglesii
and *H. roseum*
Senecio lautus subsp.
maritimus
Angophora cordifolia
Boronia mollis
Banksia robur
Acacia beckleri

Number 7

Australian native ferns
Grafting *Prostanthera* spp.
Leptospermum squarrosom
Correa reflexa
Rulingia hermanniifolia
Eucalyptus mannifera
subsp. *maculosa*
Dampiera diversifolia
Howittia trilocularis
Thryptomene saxicola
Melaleuca fulgens
Calostemma purpureum
Myoporum floribundum
Banksia spinulosa
Anigozanthos 'Pink Joey'

Number 8

Winter colour
The use of tissue culture
Darwinia citriodora
Patersonia spp.
Helichrysum bracteatum
'Diamond Head'
Angophora costata
Melaleuca lateritia
Thomasia petalocalyx
Beaufortia sparsa
Kunzea ambigua
Isopogon anethifolius

Number 9

Plant nutrition
Acacia adunca
Dendrobium kingianum
Callistemon phoeniceus
Eucalyptus rupicola
Homoranthus flavescens
Pultenaea villosa
Albizia lophantha
Boronia deanei
Grevillea johnsonii
Grevillea longistyla
Melaleuca cuticularis
Clematis aristata
Grevillea 'Poorinda'
Royal Mantle'
Hypocalymma cordifolium
'Golden Veil'

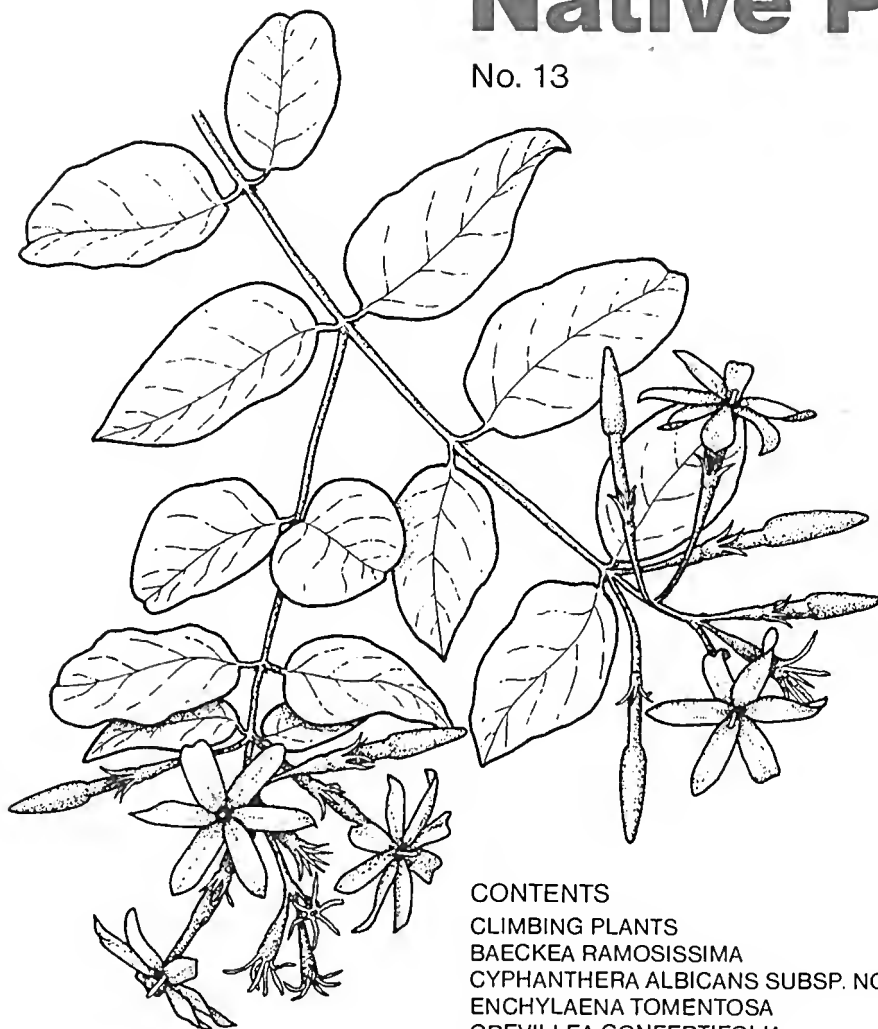
Number 10

Indoor plants
Callistemon subulatus
Phebalium squamulosum
subsp. *argenteum*
Acacia howittii
Eucalyptus moorei
Tristania laurina
Correa baeuerlenii
Grevillea obtusiflora
'Little Thicket'
Boronia subulifolia
Hibbertia empetrifolia
Kunzea 'Badja Carpet'
Commersonia fraseri
Melaleuca elliptica
Myoporum debile
Leptospermum lanigerum
var. *macrocarpum*

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Jasminum aemulum

CONTENTS

CLIMBING PLANTS	298
BAECKEA RAMOSISSIMA	307
CYPHANTHERA ALBICANS SUBSP. NOTABILIS	308
ENCHYLAENA TOMENTOSA	309
GREVILLEA CONFERTIFOLIA	310
MYOPORUM BATEAE	311
HELICHRYSUM APICULATUM	313
HOYA MACGILLIVRAYI	314
KUNZEA AFFINIS	315
OLEARIA ERUBESCENS	316
NEMATOLEPIS PHEBALIODES	317
PROSTANTHERA TERETIFOLIA	318
PHEBALIUM SQUAMULOSUM SUBSP. PARVIFOLIUM	319
PANDOREA PANDORANA 'GOLDEN RAIN'	321
VERONICA FORMOSA	322
INDEX	323

CLIMBING PLANTS

Climbers can be the most dramatic of plants in the home garden. Apart from their aesthetic value, climbing plants are excellent for shading a porch, terrace or patio. Cool shadows cast by creepers on a summer day can be very refreshing and a wall with a mantle of foliage will not be as hot as one left bare. Climbers create screens to give privacy or to separate one area from another. Whether trained up a trellis, along a fence, or allowed to form an arbour, they can be used to conceal a garden work area or compost heap, or to soften a fenceline.

With the advent of smaller gardens, space must be more effectively used. As climbers require very little ground they can be easily incorporated into the small garden. They are particularly attractive when grown among trees and shrubs as is the case in their natural environment.

The term 'climber' is often used synonymously with the word 'vine' and includes all plants which use other plants or objects for support. Vines climb by various means and they attach themselves to supports by tendrils, leaf stalks, roots or hooked spines or they may simply scramble over an object.

Modes of climbing

Tendrils: modified stems or leaves which twist about any nearby support. Sometimes the leaf stalk itself may act as a tendril.

Roots: some climbers produce, along their stems, adventitious roots which enable them to cling to any slightly rough surface.

Hooks: some climbers support themselves by hooks or spines produced from various parts of the plant.

Support for climbers

Clinging vines with root-like holdfasts or adhesive discs on aerial rootlets are best used on brick or stone although they may need some wire support at intervals. They can also be grown on heavy wire fencing or



Aphanopetalum resinosum

on a tree trunk or stump. All other types of vines may be grown against trellises, fences or lattice work.

Vines used as features may be effectively supported by arranging three stakes to form a tripod.

Soil

Results are always better if the soil is prepared prior to planting. The ground should be well dug and good drainage provided. The addition of gypsum, coarse sand and plenty of organic material will improve the structure and drainage of heavy clay soils.

When planting out, it is important to tease out the roots of container-grown plants.

Mulching

The addition of a mulch to the soil surface will help to keep the root zone cool, conserve moisture and suppress weed growth. Organic mulches, such as grass clippings, leaves, peat moss, compost or bark, enrich the soil as they break down but the stem area must be kept free of mulch to discourage fungal organisms.

Fertilising

This should be carried out in early spring or autumn, although in cooler regions care should be taken not to encourage new growth in winter when it can be affected by frosts.

Slow release fertilisers such as blood and bone or Osmocote® (8–9 months release) can be applied in autumn.

Liquid fertilisers such as Thrive®, Aquasol® or Zest® can also be applied during cooler weather.

The powdered form of blood and bone can be worked into the hole prior to planting.

Granulated fertilisers such as Multigro® or Gro-plus® can be used for spring fertilising as the nutrients are readily available to plants when watered in.

Watering

A thorough soaking twice a week during warmer weather is much more beneficial than regular light watering which tends to encourage the development of surface roots.

Watering should also be carried out during winter months particularly in areas where strong winds are prevalent or where there are heavy frosts which dry out the soil.

Pruning

Climbers grown for foliage may be pruned at any time particularly if cutting back to maintain an orderly appearance.

To encourage branching, elongated shoots should be pinched back and long sucker shoots should also be removed or cut back.

All dead wood should be removed and major thinning out should be done in autumn. Spring flowering plants should be pruned after flowering. Severe cutting back when a climber has become excessively overgrown should only be carried out when the plant is dormant.

Species to use

Many native climbers have considerable potential but as yet have not been widely used. The following species are most suitable for Australian gardens.

Perennial climbers

Aphanopetalum (Cunoniaceae) is an endemic Australian genus of two species of scrambling or twining shrubs:

A. resinosum, from the rich soils of coastal Queensland and New South Wales, is a dense stem twiner with dark green lustrous



Billardiera ringens

leaves and small greenish flowers. It prefers a shaded position and well composted soil and is propagated from cuttings.

Billardiera (Pittosporaceae) is an endemic Australian genus containing more than twenty climbing species, many of which perform well as garden plants. Although they prefer some shade, they are hardy and able to withstand frost, wind and sun exposure:

B. longiflora (purple apple-berry) is a very attractive creeper from south-eastern Australia. It climbs by twining the main stem and has narrow leaves 2–4 cm long. The greenish-yellow flowers are borne singly and are shaped like a long bell with the petals ultimately separating and often becoming purplish. The green berries turn blue in autumn. The coastal variety has red berries and in southern Tasmania they may be white. The fruits are edible. This species can be effectively trained against a shady fence. It flowers from October to January and is propagated from seed.

B. ringens (Chapman River bell-flower) is from Western Australia and was previously known as *Marianthus ringens*. This species has broad, leathery, deep green leaves. Orange flowers about 2.5 cm long are borne in clusters in spring. It is suitable for a larger trellis and is propagated from seed.

B. scandens (apple-berry) grows in the drier eucalypt forests of the coast and tablelands of all States except the Northern Territory and Western Australia. It is a wiry creeper which may twine for up to 3 m. The

wavy-edged leaves are small and narrow and the greenish-yellow flowers hang on slender stalks. The fleshy olive-green berries are edible. *B. scandens* is suitable for a sunny position on a low trellis. Propagation is from seed which may take ten weeks to germinate.

Clematis (Ranunculaceae) is a large genus of climbing plants with approximately 250 species. In Australia there are five species of which four are endemic:

C. aristata (traveller's joy or old man's beard) grows in moist, sheltered gullies from Queensland southwards to Tasmania. It is supported by long twining stems or leaf tendrils and grows rapidly, scrambling over any available support. Clusters of creamy white flowers are borne in profusion in spring and are followed by conspicuous balls of fluffy white seeds, hence the common name: old man's beard. *C. aristata* is hardy, but requires a sheltered position in cooler areas and can be trained against a fence. Propagation is from cuttings (see *Growing Native Plants* No. 9, p. 219).

C. microphylla occurs in all States except the Northern Territory, especially near coasts and rivers. It is a dainty climber similar to *C. aristata* but with smaller leaflets to 3 cm long. It is vigorous, frost-hardy, enjoys full sun, and can be trained on a fence or trellis.

Clematis aristata



Eustrephus (Philesiaceae) is a monotypic genus consisting of a polymorphic species which ranges in distribution from Australia to New Guinea, New Caledonia and the Loyalty Islands:

E. latifolius (wombat berry) is a slender stemmed, flexuous vine, native to the east coast of Australia and favouring moist areas. The glossy green leaves, 5–10 cm long, have distinctive parallel venation. The flowers, borne in small clusters, are white, pink or purple and are followed by bright orange fruits which often persist throughout winter. It prefers a cool root run and rich soil in a shaded position and needs support by tying. Propagation is from seed.

Geitonoplesium (Philesiaceae) is another monotypic genus consisting of a single polymorphic species extending from S.E. Asia to Australia and Fiji:

G. cymosum (scrambling lily) is found in coastal sandstone gullies in Queensland, New South Wales, Victoria and New Caledonia and is a twining, lily-like plant with smooth leaves 5–8 cm long. The flowers, clustered on the stem tips, are white inside, often purplish-green outside, and develop into globular purplish-black berries. This species is hardy in a moist, shady position but requires support by tying. Propagation is from seed.

Hardenbergia (Fabaceae) is a genus of twining plants with three endemic Australian species:

H. comptoniana (wild wistaria or wild sarsaparilla) is endemic to the south of Western Australia and is widely cultivated. It is a twining plant with trifoliolate leaves. Clusters of violet-blue pea flowers are borne in profusion in spring. It is very hardy and extremely attractive when in flower. *H. comptoniana* is suitable for a trellis and can be propagated from scarified seed.

H. violacea (coral pea or false sarsaparilla) is a widespread wiry scrambler which flowers in early spring. The inflorescences form spectacular garlands of pea flowers which trail over banks and hillsides and occasionally ascend tree trunks for 2–3 m. It occurs naturally on the coast and tablelands of south-eastern Australia as a shrub or climber. Flower colour varies from purple to pink to white. The leaves, to 10 cm long, are leathery with prominent veins. Seeds are contained in a flat pod. Plants propagated from tablelands specimens are frost-hardy. *H. violacea* requires well-drained soil in sun or semi-shade and is suitable for a trellis. Propagation is from scarified seed or cuttings.



Hardenbergia violacea

H. violacea 'Happy Wanderer' is an extremely vigorous cultivar which originated as a seedling in the private garden of a nurseryman in Springvale, Victoria. It has greater vigour, larger leaves and floral racemes, and flowers from May to September compared with July to October for *H. violacea*.

Hoya (Asclepiadaceae) is a large genus of milky-sapped climbers with over 200 species of which seven occur in Australia:

H. australis (wax flower) is a widespread succulent climber from eastern Australia. It grows in a variety of habitats and is commonly seen as a scrambler on rock faces. The oval, pointed leaves are fleshy or leathery and the clusters of waxy, white flowers are occasionally tinged pink in the centre. It is adaptable in gardens in warmer areas but requires plenty of light to flower well. *H. australis* can be used as a container plant if support is provided. Propagation is from cuttings.

H. macgillivrayi is a beautiful and spectacular species endemic to Cape York Peninsula in northern Queensland (see p. 314). It is a fast growing twiner for warm,



Hoya australis

sheltered areas and bears clusters of waxy maroon flowers up to 6 cm in diameter.

Jasminum (Oleaceae) is a large genus comprising approximately 300 species, of which nine occur in Australia:

J. aemulum is a rainforest species from north Queensland and the Northern Territory and is suitable for the warmer coastal areas of the east coast. It has shiny oval leaves to 5 cm long and bears terminal clusters of fragrant white flowers. *J. aemulum* needs a sunny position and is propagated from cuttings.

J. lineare (desert jasmine) occurs in the drier areas of all States except Tasmania as a shrub or semi-climber, sometimes twining. The leaves are trifoliolate and the fragrant funnel-shaped white flowers are borne in small loose clusters. It is hardy in hot, dry conditions and is propagated from cuttings.

Kennedia (Fabaceae) is a widespread Australian genus of fifteen endemic species closely related to *Hardenbergia*. All species are scrambling vines but will climb any supporting shrub or tree. They have trifoliolate leaves and pea flowers and are propagated from scarified seed:

K. beckxiana, one of the most handsome of the kennedias, is endemic to the south of Western Australia. The flowers are bright orange-red with a prominent greenish-yellow blotch at the base of the standard petal and are attractive to birds. It requires a sunny position and ample watering.

Kennedia coccinea, from the karri and jarrah forests of Western Australia, is a twining vine found among forest trees and shrubs. In spring it bears masses of orange-red flowers held above the grey-green foliage. *K. coccinea* requires a well-drained position in sun or partial shade.

K. macrophylla is a vigorous climber endemic to the south-west region of Western Australia. The species has large, light-green leaves and in spring and summer it produces dull-red flowers which are attractive to birds. The young foliage is covered with silky hairs. It requires protection from frosts but will withstand dry conditions.

K. nigricans (black coral pea) is a vigorous twining plant with striking, 3 cm long, black and yellow flowers which are attractive to birds. It is common on deep sand on the south coast of Western Australia. *K. nigricans* is often cut back by frost but usually recovers and spreads rapidly over fences or banks.

K. retrorsa is a showy, vigorous climber with a very restricted distribution near the Hunter Valley area of New South Wales. The species possesses large, hairy, bright green leaves, and the profusion of red-purple flowers appearing in spring is carried above the foliage on erect stems. It has proved completely hardy in Canberra and is suitable for most situations.

K. rubicunda (dusky coral pea) is a vigorous scrambler from the eastern States (except Tasmania). Its tough, twining stems are brown and hairy and the leaves are dark green. It has dull-red flowers which are attractive to birds and is an excellent plant for garden-use if properly controlled.

Muehlenbeckia (Polygonaceae) is a small genus comprising approximately fifteen species of which ten species are endemic to Australia:

M. adpressa (climbing lignum) is abundant along the coasts of southern Australia. The rounded, bright green leaves are often heart-shaped at the base and crinkled on the margins. The small, greenish flowers are insignificant. This hardy plant is a useful fence cover in coastal areas and requires little maintenance. Propagation is from cuttings.

Pandorea (Bignoniaceae) is a small genus comprising eight species of twining plants, four of which are Australian:

P. jasminoides is endemic to Queensland and New South Wales and is a spectacular climber with dark green feathery leaves and pink trumpet-shaped flowers with maroon centres. It can be frost-tender when young

and is suitable for a trellis in a shaded, moist position. Propagation is from cuttings.

P. pandorana (wonga vine) is a handsome, tall, woody climber related to *Jacaranda* and *Bignonia*. A widespread and variable species, it is endemic to wet forest from Tasmania through to Queensland. *P. pandorana* is an extremely floriferous, vigorous climber with a twining habit and is suitable for growing over a pergola or trellis. The bright green leaves are divided into five to seven leaflets. The creamy or pale brown flowers are borne in loose clusters and are tubular with five pointed lobes. The throat of the floral tube may be dotted or wholly suffused with colours varying from red to purple or maroon. The fruit is a capsule which splits down the centre to release numerous winged seeds. Wonga vine is quite hardy but prefers some shade and is propagated from seed or cuttings. A very attractive cultivar is expected to be registered as *P. pandorana* 'Golden Rain' (see p. 321).

Kennedia retrorsa





Parsonsia straminea

Pandorea pandorana



Parsonsia (Apocynaceae) is a large genus of climbers comprising approximately a hundred species, of which twenty species are endemic to Australia:

P. eucalyptophylla (monkey vine, gargaloo), of the dry western areas of Queensland and New South Wales, is a dense, prolific-flowering plant with highly perfumed flowers. It is a strong, woody climber which can also scramble over the ground and may cover an extensive area. It can be fairly readily propagated from cuttings.

P. straminea (monkey rope, twining silk pod) is a twining forest climber which can attain a great length and is commonly found growing in wet sclerophyll forests from southern New South Wales to Queensland. *P. straminea* has broad, pointed leaves which are paler on the undersurface. The flowers are small and produce narrow, greenish-coloured fruits to 20 cm long which are commonly called 'silk pods' because the seeds are embedded in a mass of silky hairs. A shady, well-watered position in milder areas is preferred but it can be grown in cooler regions. It is suitable for a trellis or tall tree trunk and is propagated from cuttings.

Passiflora (Passifloraceae) is a very large genus of climbing plants consisting of approximately 500 species. The genus extends beyond Australia and includes the edible passionfruit. The nine Australian species occur in the rainforests of northern and eastern Australia:

P. cinnabarina (red passion flower) is a most attractive tendril climber with wrinkled, three-lobed leaves which are deeply incised. The large, unusual flowers are bright red and have a crown of filamentous appendages within the petals. The natural distribution of *P. cinnabarina* is from northern New South Wales to Melbourne where it grows in wet forests in hilly country mainly east of the Great Dividing Range. This is a hardy, attractive climber for fence, trellis or scrambling over tall trees. Although adaptable, it prefers moist locations. Propagation is from cuttings.

P. herbertiana is from an area extending from the coast to adjacent ranges of Queensland to south-eastern New South Wales. It has pale orange-yellow or greenish flowers and is fast-growing and frost-tender.

Sollya (Pittosporaceae) is an endemic Australian genus of three species of scrambling or twining shrubs:

S. heterophylla (blue-bell creeper) is commonly found growing in wandoo (*Eucalyptus accedens*) forest and woodland in Western Australia. It may be a shrub or semi-climber



Passiflora cinnabarina

with light, twining stems. The foliage is dense, the small flowers are bell-shaped and intensely blue and are followed by fleshy, cylindrical blue fruits. *S. heterophylla* is very hardy and adaptable and may be used to cover banks or low fences. Propagation is from seed or cuttings.

Tecomanthe (Bignoniaceae) is a small tropical genus of seventeen species with one species endemic to Australia:

T. hillii (pink trumpet vine) is a twining vine from the coastal rainforests of southern Queensland and is worthy of much more extensive cultivation in warmer areas. The reddish, tubular flowers, marked with darker lines, can be up to 10 cm long. *T. hillii* is hardy in mild climates and requires a semi-shaded position on a fence or trellis. Propagation is from cuttings.

Annual climbers

The Cucurbitaceae family are chiefly tendrill-bearing, herbaceous climbers, often yellow-flowered, and well known through cultivated members such as pumpkins, cucumbers and marrows. In Australia, ten genera and twenty-five species are native, but these taxa have not been widely cultivated. *Luffa cylindrica* and *Lagenaria siceraria* are decorative gourds which can be treated as annuals for quick growth over a pergola or trellis in summer.

Lagenaria siceraria (bottle gourd or false calabash) has been cultivated since prehistoric times throughout the tropics. The

species is regarded as being native to north-eastern Queensland since plants were widely collected there by botanical explorers in the middle of the last century.

The large leaves are heart-shaped and the lightly scented, solitary white flowers open at night. The fruits, commonly known as gourds, are variable in shape and size and are smooth and hard-shelled when ripe. These gourds were used as water-containers and the young fruits eaten by the Aborigines. *L. siceraria* is readily grown from seed.

Luffa cylindrica (sponge gourd), which occurs in north-east Queensland and the Northern Territory, is also distributed widely over tropical and sub-tropical Africa and Asia. This is a tendrill climber with lobed leaves and showy yellow or whitish nocturnal flowers which last until morning. The flowers develop into slender, cylindrical, curved fruits up to 50 cm long. The interior of the fruit is fibrous and can be dried to produce the 'loofah' or bath sponge. *L. cylindrica* grows easily from seed.

Seed of both these climbing annuals is available from specialist seed suppliers.

Climbers as indoor plants

Some Australian climbers can be effectively used as indoor plants. They may be placed in a container to which a cylindrical frame has been added, or they can be trained to cascade from a container placed on a shelf or pedestal.

Important considerations for indoor plant culture are:

The potting mix: This should be light and porous, for example, 2 parts loam, 1 part sand, 1 part leaf mould, 1 part peat moss and 1 part well rotted animal manure. Suitable potting mixes are readily available commercially.

Feeding: Regular applications of a liquid fertiliser during the growing season will help to keep plants healthy.

Watering: Some of the factors which regulate the need for water are room temperature, amount of natural light, size of plant, and soil structure. The soil should be kept moist but not saturated. Generally, small pots should be watered twice-weekly and large pots once a week.

Light and temperature: Some plants will survive in dark corners but respond best when natural light is available.

Dust: Leaves covered with a film of dust cannot transpire normally. Leaves should be sponged once or twice a month, preferably with a commercial leaf polish.



Tecomanthe hillii

The following species are suitable indoor climbers:

Cissus antarctica (Vitaceae) is a quick growing tendril climber from rainforests and sheltered gullies in New South Wales and Queensland. The heart-shaped leaves are a glossy deep green and the small, hairy, greenish flowers are borne in dense clusters. The fruit is a globular black berry. *C. antarctica* is easy to grow as an indoor plant and requires little maintenance (see *Growing Native Plants* No. 10, p. 228). Propagation is from cuttings.

Hoya australis (see p. 301) is ideally suited to indoor use but requires a well-lit position for optimum development.

Lygodium reticulatum (Schizaeaceae) is a fast-growing climbing fern from north-east Queensland, with twining wiry stems. The narrow, light green fronds make an especially attractive growth over a wire frame or trellis. It should not be placed in direct sunlight. Propagation is from spores or by division of crowns.

Pothos longipes (Araceae), from the north coast of New South Wales and Queensland, is a slender-stemmed, many-branched root climber for warmer areas. The unusual leaves have a flattened stalk separated from the leaf by a sharp constriction to give the impression of a double leaf. The tiny flowers are borne on a spike enclosed by a bronze coloured sheath and are followed by red fleshy fruits. It requires a well-lit position and can be raised from seed.

Rhaphidophora australasica (Araceae) is a very handsome plant which is excellent for use indoors. In its natural habitat in the rainforests of Queensland and the Northern Territory it clings by roots produced along the stems to the bark of supporting trees. The shiny leaves are up to 40 cm long and the cream flowers are borne in a spike enclosed in a green sheath. Propagation is from cuttings (see also *Growing Native Plants* No. 10, p. 230).

Effie Mullins

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Name derivations

Aphanopetalum resinum: *Aphanopetalum* — from the Greek, aphanes, inconspicuous, and petalon, petal; *resinum* — from the Latin, resinous.

Billardiera longiflora: *Billardiera* — after J.J.H. de Labillardière (1755–1834), a French botanist; *longiflora* — from the Latin, longus, long, and flos, flower.

Billardiera ringens: *ringens* — from the Latin, gaping, referring to the resemblance of the flower to the gaping mouth of an animal.

Billardiera scandens: *scandens* — from the Latin, scandere, to climb.

Cissus antarctica: *Cissus* — from the Greek, kissos, ivy, referring to the climbing habit of some species of the genus; *antarctica* — from the Greek, antarcticos, southern; in botany, this implies south of 45°S latitude.

- Clematis aristata*: *Clematis* — from the Greek name given to *Clematis vitalba*, a species native to Greece; *aristata* — a botanical Latin adjective, meaning bearded, referring to the bristle-like appendage of the fruit.
- Clematis microphylla*: *Microphylla* — from the Greek, micros, small, and phyllon, leaf.
- Eustrephus latifolius*: *Eustrephus* — from the Greek, eu, well, and strepho, to twist or twine, referring to the twining habit of some species; *latifolius* — from the Latin, latus, broad, and folium, leaf.
- Geitonoplesium cymosum*: *Geitonoplesium* — from the Greek, geiton, a neighbour, and plesios, near, referring to the close relationship of this genus to the genus *Luzuriaga*; *cymosum* — from the Greek, cyma, a wave or anything swollen; in botany, a cyme is a flowerhead in which the central axis stops growing and produces a flower, so that the oldest flower is at the centre.
- Hardenbergia comptoniana*: *Hardenbergia* — after the Countess von Hardenberg, a sister of Baron von Huegel, who collected plants in Western Australia in 1833; *comptoniana* — after Mary Compton, 1st Marchioness of Northampton, who introduced the species to cultivation in Britain c.1810.
- Hardenbergia violacea*: *violacea* — from the Latin, violet in colour.
- Hoya australis*: *Hoya* — in honour of Thomas Hoy (fl. 1788–1809), gardener at Syon House, Isleworth, Middlesex; *australis* — from the Latin, southern.
- Hoya macgillivrayi*: *macgillivrayi* — in honour of Dr William David Kerr Macgillivray (1867–1933), physician, ornithologist and naturalist, who collected the type specimen during one of several important expeditions to North Queensland.
- Jasminum aemulum*: *Jasminum* — from the Arabic, yasmin, name of a kind of fragrant shrub; *aemulum* — from the Latin, rivalling as more or less equalling, presumably another species.
- Jasminum lineare*: *lineare* — from the Latin, lineare, linear.
- Kennedia beckxiana*: *Kennedia* — after Lewis Kennedy (1759–1842), a London nurseryman; *beckxiana* — after Gustov Beckx, Consul-General for Belgium in Australia in the 1880s.
- Kennedia coccinea*: *coccinea* — from the Latin, scarlet, referring to the colour of the flowers.
- Kennedia macrophylla*: *macrophylla* — from the Greek, macros, large, and phyllon, leaf.
- Kennedia nigricans*: *nigricans* — from the Latin, blackish; the flowers are black with yellow on the standard.
- Kennedia retrorsa*: *retrorsa* — from the Latin, backwards, referring to the hairs on the pods.
- Kennedia rubicunda*: *rubicunda* — from the Latin, red, referring to the red flowers.
- Lagenaria siceraria*: *Lagenaria* — from the Greek, lagenos, flask, referring to the shape of the fruits; *siceraria* — apparently named after the fermented drink which the Chilean natives made in the hollowed-out and perfumed gourds.
- Luffa cylindrica*: *Luffa* — from the Arabic, lufa, the name of the vegetable sponge, *L. cylindrica*, from which comes the loofah or bath sponge; *cylindrica* — from the Latin, cylindrical.
- Lygodium reticulatum*: *Lygodium* — from the Greek, lygodes, like a willow, referring to the supple shoots of the climbing plant; *reticulatum* — from the Latin, net-like, referring to the veins on the leaves.
- Muehlenbeckia adpressa*: *Muehlenbeckia* — after H.G. Muehlenbeck (1798–1845), French physician, who investigated the flora of Alsace, especially cryptogams; *adpressa* — from the Latin, ad, towards, and pressus, pressed; in botany, appressed.
- Pandorea pandorana*: *Pandorea* — relating to the legend of Pandora's box, of which Spach (the author of the name) is said to have been reminded by the fruits. Another suggestion is that the original species was connected with a plague of insects on Norfolk Island; *pandorana* — from Pandora and the Latin suffix -anus, indicating the position of or relating to.
- Pandorea jasminoides*: *jasminoides* — from *Jasminum* and the Greek suffix -oides, like or resembling.
- Parsonia straminea*: *Parsonia* — after James Parsons (1705–1770), a London doctor, author of *Microscopical Theatre of Seeds*; *straminea* — from the Latin, meaning made of straw, possibly referring to the long straw-coloured hairs on the seeds.
- Parsonia eucalyptophylla*: *eucalyptophylla* — from the genus *Eucalyptus* and the Greek, phyllon, leaf, having leaves like those of *Eucalyptus*.
- Passiflora cinnabarina*: *Passiflora* — from the Latin, passio, passion and flos, flower, referring to the resemblance of central parts of the flower to elements of the Crucifixion; *cinnabarina* — from the Greek, cinnabari, cinnabar (scarlet), referring to the colour of the flowers.
- Passiflora herbertiana*: *herbertiana* — after 'the family name of the possessor and introducer of the plant', 'in the collection at Highclere, Hampshire', c.1820.
- Pothos longipes*: *Pothos* — from the Sinhalese name, potha, for these climbing plants; *longipes* — from the Latin, longus, long, and pes, foot, referring to the long stalks of the flowers.
- Rhaphidophora australasica*: *Rhaphidophora* — from the Greek, rhapsis, needle and phoros, bearing, because the fruit bears numerous needle-shaped points; *australasica* — botanical Latin, Australian or Australasian.
- Sollya heterophylla*: *Sollya* — after R.H. Solly (1778–1858), an English botanist; *heterophylla* — from the Greek, heteros, different or unequal, and phyllon, leaf, referring to the variability of the leaves.
- Tecomanthe hillii*: *Tecomanthe* — from the genus *Tecoma* and the Greek, anthos, flower, referring to the relationship between these two genera in the same family; *hillii* — named after the collector of the type specimen, W. Hill.

BAECKEA RAMOSISSIMA



Distribution

This showy small shrub, commonly known as rosy heath myrtle, belongs to the family Myrtaceae. It is widely distributed from south-eastern New South Wales through central Victoria to Tasmania and the Mt Lofty Ranges and Kangaroo Island in South Australia. *B. ramosissima* occurs in a variety of habitats ranging from sphagnum swamps, heaths or open forests on the coast to mallee country inland. Throughout its range the species varies in habit from low and procumbent to an erect shrub 1 m high and 1.5 m wide.

There are several different forms of *B. ramosissima* in cultivation: the prostrate mountain form with small, white flowers; the compact form with deep, rosy pink flowers; the upright form with pale pink flowers; and a prostrate form from the south coast of New South Wales with small, white to pale pink flowers.

The leaves are alternate, 4–10 mm long and 1–2 mm wide, and linear to cylindrical with scattered inconspicuous oil dots on the undersurface. The five-petalled flowers, 6–10 mm wide, are solitary in the axils of the upper leaves on slender pedicels which are longer than the leaves. The capsules have three compartments which usually each hold a pair of granular seeds.

B. ramosissima is a hardy shrub suitable for small gardens, rockeries and containers. It is relatively disease free and flowers profusely from spring to early summer. Tip pruning after flowering will induce bushiness and increase next season's flowering.

It is frost-resistant and tolerates poor soils and extremely diverse growing conditions ranging from full sun to dappled shade and from continuously moist to intermittently dry.

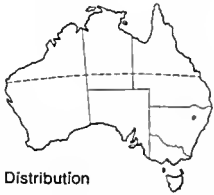
Baeckea ramosissima may be propagated from semi-hardwood cuttings in summer, preferably from the lower shoots which have not yet flowered. Alternatively, the species may be grown from seed but this is often difficult to collect.

Andrew Hughes

Baeckea ramosissima: *Baeckea* — in honour of Abraham Baeck (1713–1795), Swedish physician and naturalist, a friend of Linnaeus; *ramosissima* — from the Latin, *ramosus*, branched, and the suffix *-issimus*, most, referring to the much-branched habit of the plant.



CYPHANTHERA ALBICANS subsp. NOTABILIS



Distribution

Cyphanthera albicans subsp. *notabilis*: *Cyphanthera* — from the Greek, *kyphos*, bent or bowed forwards, and *antheros*, anther, referring to the horseshoe-shaped anthers; *albicans* — from the Latin, *albus*, white and the suffix *-icans*, becoming or almost, probably referring to the flower colour; *notabilis* — from the Latin, remarkable.



The genus *Cyphanthera* contains nine species and is endemic to southern temperate Australia. It is a member of the family *Solanaceae*, which also includes the tomato and potato.

C. albicans subsp. *notabilis*, formerly known as *Anthocercis albicans*, is found only in the Warrumbungle Ranges on the north-western slopes of New South Wales, where it grows on rocky slopes in dark sandy soils derived from igneous rocks. Though usually found growing in shrubland on exposed sites, it also occurs occasionally in dry sclerophyll forest.

This subspecies is a beautiful pendulous shrub, 2 m high by 2 m wide, with a whitish downy covering of hairs on the leaves and young branches. The leaves are almost without stalks, ovate or elliptic to oblong in shape, 18–25 mm long and 3–6 mm wide. Compared to the other subspecies (namely subsp. *albicans* and subsp. *tomentosa*) this one is particularly floriferous. The flowers, produced in spring and early summer, are pale yellow to creamy white¹ with purple streaks² within the short tubular base or corolla. The individual flowers, which are starlike in appearance, can vary from 13 to 22 mm in length, with the narrow petals spreading to 20 mm wide. They are borne in the axils of the upper leaves in clusters of two or three. The fruit is a small, smooth, egg-shaped or globular capsule, opening from the apex by four valves.

Propagation is by cuttings taken in mid-summer and placed in a well-drained cutting mix under moderate humidity. With the use of a softwood rooting hormone, a strike rate above 50 per cent can be expected.

In cultivation this species prefers well-drained soils and dappled shade, though it will tolerate a wide range of conditions including heavy soils, full sunlight and extended dry periods. While not particularly sensitive to frosts, a protected position is recommended in Canberra and on the Tablelands. With age, it tends to become straggly, but this can be prevented by light, tip pruning after flowering to encourage a bushier, more compact shape.

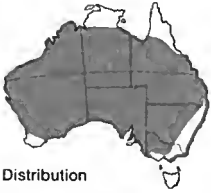
While it is relatively free from most common pests and diseases, *Botrytis* (grey mould) can be a problem in very shaded positions. This fungus can be controlled by spraying with Daconil® which is relatively safe to use though the concentrate must be handled with care.

Stephen Hughes

¹ RHS Colour Chart, 1966: petals, yellow group 4D.

² RHS Colour Chart, 1966: corolla stripes, purple group 79B.

ENCHYLAENA TOMENTOSA



Distribution

This member of the world-wide family Chenopodiaceae has many common names, among them ruby saltbush and barrier saltbush. It occurs in all mainland States.

E. tomentosa is a sub-shrub with procumbent or ascending pubescent, trailing branches which may grow to 1 m long. A height of 1 m is occasionally attained, however, plants are often less than half this size and some forms are prostrate.

The evergreen leaves, which are cylindrical, semi-succulent and up to 2 cm long, are tomentose with fine white hairs, giving the plant an attractive grey appearance overall. The single, axillary flowers are insignificant and occur from spring to early summer and autumn. These are followed by very showy, small (5 mm diameter) fruits which are red when ripe. The fruits are depressed-globular and succulent and change from green to a yellow colour prior to ripening. It is usual for the differing colour stages to be present on a plant at the one time, adding greatly to the visual impact.

E. tomentosa is found over a wide range of poor soils from coastal, partially stabilised, dune sands near the Southern Ocean in South Australia, where it may be plained by salt and sand-bearing winds, to riverine clay loams, often in saline depressions, and to the deep siliceous, sandy soils in many semi-arid regions of the continent. The species is recorded in salt marsh habitats in tropical, sub-tropical, and temperate regions.

The leaf type of *E. tomentosa* is typical of many chenopods. Reduced size and succulence are adaptations to nutritionally poor soils and the leaf tomentum reflects considerable heat which may otherwise be damaging to cell tissue.

In cultivation, with favourable soil conditions, a less sparse and possibly more vigorous plant may result, well able to cope with any periods of relative dryness or with cold conditions including frosts. *E. tomen-*



Enchylaena tomentosa: *Enchylaena* — from the Greek, egchlos, fleshy or succulent and chlaena, cloak or lined cloak, referring to the ripe fruiting perianth; *tomentosa* — botanical Latin, meaning covered with dense short curled or curved hairs.

tosa has been shown to tolerate temperatures of -6°C in cultivation at the Australian National Botanic Gardens in Canberra.

The species is propagated successfully from seed or cuttings. Seed should be cleaned by removing the succulent tissue of the fruit prior to sowing and germination should occur in one to four weeks. A well-drained medium, kept moist without excessive overhead watering, is desirable for cuttings.

E. tomentosa has a wide climatic, soil and topographic tolerance. Full sunlight encourages the best growth in the more desirable forms, such as those with a prostrate habit. The variation in fruit colour, which persists over long periods, adds greatly to the value of this species in cultivation.

Barrie Hadlow

GREVILLEA CONFERTIFOLIA



The shrub *Grevillea confertifolia* is commonly known as Grampians grevillea or dense-leaf grevillea. It belongs to the family Proteaceae which includes the banksias and waratahs.

It occurs naturally in the Grampians of Victoria where there are three recognised forms: a shrubby form, which occurs along creeks, and two low-spreading forms. These decumbent forms are restricted to damp sandstone plateaux at high elevations (1050–1150 m) in open forest.

Grevillea confertifolia: *Grevillea* — after C.F. Greville (1749–1809), an English patron of botany; *confertifolia* — from the Latin, *confertus*, crowded, and *folium*, leaf, referring to the densely crowded foliage.



The decumbent forms reach 30–60 cm in height and may spread over a distance of 1–3 m. They are ideal ground covers for low maintenance gardens and for landscaping large areas. They form an attractive green mat of sharp, needle-like leaves, 2–3 cm long with rolled margins. The leaves are dark green above, lighter below, and occur alternately along the stem.

The flowers are 1 cm long when open and are borne in compact, terminal racemes 2.5 cm long and 2 cm wide with a stubby toothbrush appearance. They are available in two colours: one, a dark wine-red¹ and the other, from the Major Mitchell Plateau, a rosy pink.² Flowering occurs in spring but the month varies with different climates. October is peak flowering time in Canberra.

G. confertifolia is propagated from semi-hardwood cuttings, about 10 cm long, taken after flowering. Very soft tips should be removed as they may wilt and rot creating ideal conditions for fungal contamination. A rooting hormone solution of 2000 ppm IBA, 25°C bottom heat, misting, and a cutting mix of 2 parts sand, 1 part perlite and 1 part peat moss are recommended. Under these conditions the cuttings should produce roots in two to eight weeks. If callousing occurs at the base of the cuttings they should be recut through the callous to promote root growth. Propagation from seed is unreliable. Further information on propagation is provided in *Growing Native Plants No. 2*.

In cultivation the decumbent forms grow well, tolerating heavy frosts and a variety of soil types, from heavy clays to well-drained rocky soils provided ample water is available. The addition of a nitrogenous fertiliser in early spring and late summer is highly recommended.

Specimens planted at the Botanic Gardens have taken nine years to reach a height of 60 cm and a width of 3 m, and have layered, that is, they have produced roots where the stem rests on the ground.

Scale insects are pests common to grevilleas and may cause considerable damage. If infestations are severe and no predators or parasites are evident Rogor[®], at the recommended rate, should be used. The grevillea leaf miner, and other moth caterpillars which chew leaves and make webbing and frass, may also be a problem. If so, Dipel[®] may be used for the leaf chewers and the systemic insecticide Rogor[®] for the leaf miner.

G. confertifolia has been commercially available for a number of years.

Stuart Donaldson

¹ RHS Colour Chart, 1966: red-purple group 61B.

² RHS Colour Chart, 1966: red-purple group 63B.

MYOPORUM BATEAE



Distribution

Myoporum bateae: *Myoporum* — from the Greek, *myo*, to close or be shut, and *poros*, pore, referring to its ability to exist in dry areas; *bateae* — named in honour of the collector of the type specimen, Miss Mary Bate.

Myoporum bateae, a member of the family Myoporaceae, was described and named a century ago by Baron Ferdinand von Mueller, but within a few years he had reduced it to a synonym of *M. floribundum*. Such relegation to obscurity was a fate unworthy of this elegant plant. Only recently has it been recognised again as a species in its own right.

A restricted natural occurrence has contributed to the obscurity of *M. bateae*. It extends sporadically down the New South Wales coast from the Nepean River to Mt Dromedary, but nowhere is it common. The habitat of *M. bateae* is tall *Eucalyptus* forest in steep mountain gullies where it favours clayey, often rocky soils on moist, southerly or easterly aspects.

The plants are pyramidal shrubs 3–5 m tall, with either one or a few slim, straight





Myoporum bateae

stems bearing slender, horizontal branches. The fresh, green foliage is rather sparse with the leaves elegantly curved downwards from the branchlets. Individual leaves are narrowly lanceolate, tapering to a long acute apex and are 4–8 cm long and 2–6 mm broad. They are thin and soft with finely toothed margins and are dotted with raised glands.

From September to November, clusters of pale mauve¹ flowers appear along the branchlets, so numerous that the plant seems to have been dusted with pink snow. The miniature flowers are about 5 mm broad. They are followed by thin, flat, dry fruits about 2 mm long.

Propagation can be achieved from cuttings, which strike readily within two months. They may be treated in advance with 500 ppm of IBA/NAA in equal proportions, dissolved in 50 per cent alcohol. The potential for establishment of *M. bateae* from seed is unknown. However, other species of *Myoporum* have given poor results. So far, no pests have been observed on *M. bateae*.

For best results, plants should be sited in a cool, moist, partially shaded position. A rich loam or clay soil should be suitable provided that it is free from lime. *Myoporum bateae* is moderately frost tolerant but temperatures below -5°C will cut it back severely. With age, the shrubs can become open and straggling and may need pruning to thicken the foliage.

In 1977, several individuals of *M. bateae* were planted along the northern edge of the Rainforest Gully at the Gardens. There they have thrived, achieving heights of 3–5 m within six years. It is evident that they enjoy the heavy clay soils and abundant moisture in this situation. Those plants growing in the dappled shade of eucalypts have the ideal pyramidal form of the species. Plants in heavy shade are etiolated, while others in nearly full sun are straggling.

Myoporum floribundum is closely related to *M. bateae* (see also *Growing Native Plants* No. 7, p. 171). Despite this close relationship, *M. floribundum* is readily distinguished by its pure white flowers and by its threadlike leaves which have no teeth and which hang quite vertically from the branchlets. Its habit is very different, tending to spread horizontally.

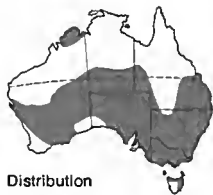
It is time that *Myoporum bateae* was brought out of obscurity and made a worthy addition to native gardens.

Michael Crisp

¹ RHS Colour Chart, 1966: buds, red-purple group 69B–70D; open flowers, 69B–D; older flowers, fading to white 155D.

HELICHRYSUM APICULATUM

(DECUMBENT FORM)



Distribution
of species

Helichrysum apiculatum is a perennial herb which is found in all States and Territories in Australia in a wide range of environments. With such a broad distribution it is not surprising that this species varies considerably in form, from a sparse erect plant up to 60 cm in height and with narrow leaves to much lower sprawling plants with fleshy

Helichrysum apiculatum: *Helichrysum* — from the Greek, helios, the sun, and chrysos, golden, the ancient Greco-Latin name of a yellow 'ever-lasting' plant; *apiculatum* — botanical Latin, ending abruptly in a short point, referring to the apiculum of the leaves which lengthens to a pale scarious appendage on the uppermost leaves.



leaves 1 cm wide. The great morphological variation observed in plants included in this taxon suggests that there may well be several species included within the complex.

The form described here was collected some years ago in South Australia by the Adelaide Botanic Gardens but the precise collection locality is unknown. This form may properly be described as 'decumbent' which indicates that the stems lie flat along the ground with the stem tips turning upwards. Most gardeners would consider the form to be 'prostrate' but this term correctly refers to a plant whose stems lie completely flat.

The stems and leaves of this form of *H. apiculatum* are covered in silky hairs which give the plant an overall grey-green appearance. The stems conform to ground contours and drape over low walls and kerbs. The flowers, which appear in late spring to early summer in Canberra, occur on the tips of the stems and rise up to 15 cm above the ground in compact heads up to 2.5 cm wide. They are a golden-yellow in colour.¹

When planted at 70 cm centres, plants grow quickly to cover the ground and form a compact mat, however, this is seldom enough to smother the more vigorous weeds. The stems occasionally form roots where they touch the ground, though only in the most favourable conditions, and the plant is unlikely to become a nuisance.

Some pests have been noted on *H. apiculatum*. These are chiefly caterpillars which attack the flower buds and leaves. Control may be effected by the use of Dipel® insecticide. Aphids are also found on new shoots and the decumbent habit of this plant makes it an ideal hiding place for slugs and snails.

Propagation is easy from cuttings taken at any time of the year. Seed should not be used for propagation since it may not produce plants which are true to form.

This form of *H. apiculatum* is reasonably long-lived — several plantings at the Gardens are from six to ten years old. The plant performs well in a variety of garden environments though the best examples are in a fairly open situation given full sun during the middle of the day. Plants growing close to large trees tend to be more sparse than those in the open but still provide a good ground cover.

The plants in the Gardens appear to be frost-hardy but drought tolerance has not been tested as all plantings have received supplementary waterings.

Lyn Meredith

¹ RHS Colour Chart, 1966: close to yellow-orange group 14A.

HOYA MACGILLIVRAYI



Distribution

Hoya, of the family Asclepiadaceae, is a large genus with over 200 species of milky-sapped, evergreen climbers. Native to Malaysia, India, China and the tropical regions of Australia, many are widely cultivated as ornamental plants. In Australia at least seven species are found throughout tropical and subtropical regions.

There has been much confusion in the classification of some *Hoya* species and the American based Hoya Society International (HSI) is attempting to re-classify the hybrids and selected forms which have been developed.

One of the most spectacular species in the Australian flora is *H. macgillivrayi*, a

Hoya macgillivrayi: *Hoya* — in honour of Thomas Hoy (fl. 1788–1809), gardener at Syon House, Isleworth, Middlesex, seat of the Duke of Northumberland; *macgillivrayi* — in honour of Dr William David Kerr Macgillivray (1867–1933), a physician and eminent ornithologist and naturalist who carried out several important expeditions to north Queensland, and who collected the type specimen.



strong succulent climber endemic to the Iron Range–McIlwraith Range area of Cape York Peninsula. In its natural habitat it climbs to reach the light in the canopy above and thrives in the strong light of the tree tops or along open creeks.

H. macgillivrayi is a fast-growing root climber and twiner with thick, oval, pointed leaves which are light green and set opposite each other on the twining stems. The flowers are up to 6 cm wide on long stalks and are borne in umbels of six to ten flowers radiating from a central axis. A rich burgundy¹ in colour, they are made up of five sepals and five waxy petals. The stamens are enclosed by a fleshy appendage called a corona. The fruit matures to a pair of pendulous follicles up to 25 cm long which split open when ripe to release the flattish wind-distributed seeds.

This decorative plant can be grown in a sheltered, semi-shaded position in warm humid areas where it can be trained against a wall or framework. In colder climates it can be cultivated as a glasshouse plant or as a container plant for the patio or indoors. A cylindrical wire frame around which the vine can be twined is effective.

This plant will not tolerate stagnant soil conditions and a loose, friable, peaty soil mixture with good drainage is essential. During winter the plant should be kept dry. Container plants can be grown in a mixture of peat and sand or sandy loam to which a slow release fertiliser such as Osmocote[®] and a little lime has been added. For maximum flowering, plants should not be overfed. An application of a slow release fertiliser at nine-monthly intervals is adequate.

Plants in containers perform better when root-bound and should not be transferred to too large a pot when re-potting. The use of terracotta pots provides a simple method of repotting. The pot can be cracked all over with a hammer and the plant with its cracked container can be repotted into a larger pot lined with fresh soil mix. This allows the roots to penetrate into the new mix while the root system is held firmly together by the cracked pot.

Seed is slow to germinate but propagation in readily carried out from cuttings. Cuttings can be taken throughout the year and should have at least three nodes. The leaves should be trimmed to half their length and the base of the cutting dipped in a root hormone solution prior to planting (for example, 500 ppm IBA/500 ppm NAA). Cuttings take three to four weeks to develop roots.

Effie Mullins

¹ RHS Colour Chart, 1966: petals, red group 53B.

KUNZEA AFFINIS



Kunzea is a genus of about thirty species of evergreen woody shrubs distributed throughout the temperate areas of the Australian continent. There are a number of species in cultivation and all have attractive fluffy flowers of white, yellow, pink or red.

The kunzeas are members of the family Myrtaceae and are closely related to *Leptospermum* and *Agonis*.

Kunzea affinis is a very attractive small shrub from the south-west corner of Western Australia where it grows in sandy soils and laterites. Several specimens at the Gardens have performed well in cultivation, providing a vivid splash of colour in late September and early October when numerous small rose-pink¹ coloured flowers cover the bushes.

Growing to a height of 1.5 m and 1 m wide, *K. affinis* can be an upright or sprawling bushy shrub with many fine woody branchlets. The small, crowded heath-like leaves are 4–6 mm long and 0.5–0.8 mm

broad and exude a fresh aromatic smell after rain or when crushed. Young new foliage is bright green and provides a contrast to the dark green of the older leaves.

The flowers are produced in twos or threes at the ends of the branchlets. Each flower has five spreading oval-shaped petals and is 2.5–3.0 mm in diameter. The numerous stamens with their bright yellow anthers are exerted and add to the attraction of the flowers. The fruit is a small capsule which opens when ripe to release the fine seed.

Propagation is best carried out from cuttings of soft new wood taken in spring or early summer. Cuttings, which take from four to six weeks to develop roots, should be dipped in a rooting hormone preparation (for example, 500 ppm IBA/500 ppm NAA).

In cultivation these plants require good drainage in a sunny or semi-shaded position and will benefit from heavy mulching with leaf litter or wood shavings. Light tip pruning throughout the plant's development will encourage bushiness.

Kunzea affinis provides a pleasing effect when incorporated in group plantings with other dry area species, such as *Melaleuca* and *Leptospermum*.

Effie Mullins

¹ RHS Colour Chart, 1966: red-purple group 70B.

Kunzea affinis: *Kunzea* — in honour of Dr Gustave Kunze (1793–1851), a German botanist; *affinis* — from the Latin, *adfinis*, neighbouring, probably indicating an affinity to another species.



OLEARIA ERUBESCENS



Distribution

Olearia erubescens: *Olearia* — assumed to be from the genus *Olea*, but it is also said that Moench named the genus in honour of Adam Olearius (1603–1671), author of a flora of Halle in Germany; *erubescens* — from the Latin, *erubescere*, to blush, probably referring to the young shoots, which are sometimes reddish.



The genus *Olearia*, which belongs to the family Asteraceae, is confined to Australia, New Zealand and New Guinea, with eighty species in Australia. The different species are commonly called daisy bushes and are found growing in a variety of soils at all altitudes.

The olearias are beautiful, free-flowering shrubs which are transformed in spring when the bushes are covered with white, pink, purple or blue daisy flowers.

Most species are hardy shrubs suitable for alkaline conditions and will endure considerable cold and periods of dryness. Many also do well in coastal gardens and will grow in full sun or partial shade.

Olearia erubescens is a small woody shrub endemic to the Australian Capital Territory, New South Wales, Victoria, Tasmania and South Australia. At high altitudes it is a small stunted shrub up to 40 cm high, and on sub-alpine grass flats and in eucalypt forest gullies it reaches 0.5 to 1.5 m.

The floriferous nature of this plant plus the attractive red colouration of its young growth make it a useful addition to the garden. It may be used effectively in a rockery, for group planting or as a container plant.

The alternate, coarsely-toothed, narrow leaves are 2–4 cm long and taper into a very short stem. They are conspicuously net-veined above and covered with dense silky hairs below, giving them a silvery appearance.

The long-stalked flowerheads are borne in axillary clusters on the previous year's shoots, forming leafy panicles up to 30–45 cm long. They last from spring to early summer. Each flower head is composed of a single row of white¹ or pink ray florets bordered by several rows of bracts and enclosing the central, yellow² disc flowers.

Propagation of *O. erubescens* is best achieved from cuttings taken in early summer. These take up to six weeks to develop roots and for best results the base of the cutting should be dipped in a rooting hormone (for example 500 ppm IBA/500 ppm NAA) prior to planting.

To maintain the health and vigour of the plant, the application of a complete fertiliser in spring and autumn is recommended. Tip pruning throughout the plant's development, and especially after flowering, will strengthen it and encourage a bushy habit.

Effie Mullins

¹ RHS Colour Chart, 1966: ray florets, white group 155D.

² RHS Colour Chart, 1966: disc florets, yellow-orange group 16B.

NEMATOLEPIS PHEBALIOIDES



Distribution

Nematolepis phebalioides: *Nematolepis* — from the Greek, *nematos*, of the thread, and *lepis*, scale, referring to the scales, fringed with hairs, at the base of the stamen; *phebalioides* — from the genus *Phebalium* and the Greek suffix *-oides*, like or resembling.



Nematolepis phebalioides is a small, attractive shrub which occurs naturally in the mallee thickets and heaths between Israelite Bay and Lake Grace in southern Western Australia.

Closely resembling the *Correa* of eastern Australia in floral structure, the genus *Nematolepis* consists of a single species limited to Western Australia. Both genera belong to the family Rutaceae but differ in the number of floral parts and the arrangement of leaves on the stem.

In *Nematolepis*, the leaves are alternate and the flowers have five petals, five small sepals and ten stamens. *Correa* has opposite leaves and the flowers have four petals and eight stamens.

Nematolepis has a rigid, upright habit and grows from 0.6 to 1 m in height. The oval-shaped leaves are glossy green above and paler beneath and vary from 10 to 20 mm in length. The stems and the underside of the leaves are covered with silvery scales.

The pendulous, bird-pollinated flowers are a brilliant red¹ and are produced on short stalks in the leaf axils. The five petals are united into a cylindrical bell-shaped tube, spreading at the top and tipped with yellow green. The stamens are yellow.

This species, which occurs naturally in clays, loams or laterites, requires perfect drainage for successful cultivation and is ideally suited for growing in a rockery or as a container plant. It can be grown in full sun although a semi-shaded position is preferable.

Propagation from seed has not been attempted at the Gardens and probably would be difficult as is the case with many species of the family Rutaceae.

At the Gardens a reasonable percentage strike was achieved by taking half-hardened cuttings in late September. Cuttings were dipped in a rooting hormone preparation of 1000 ppm IBA/1000 ppm NAA and were then placed in a warm situation (preferably with bottom heat) and kept damp. The development of roots may take up to two months.

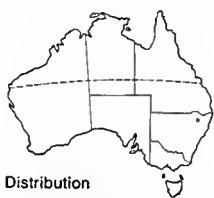
In cultivation, plants benefit from an application of a complete fertiliser in autumn and spring and mulching of the soil surface around the plant. Tip pruning throughout the development of the plant will increase its vigour.

Although not commonly known, *Nematolepis* is worthy of cultivation for its growth habit and its vividly coloured flowers which are attractive to birds.

Effie Mullins

¹ RHS Colour Chart, 1966: corolla, red group 43B; corolla lobe tips, yellow-green group 54B.

PROSTANTHERA TERETIFOLIA



The highland shrub *Prostanthera teretifolia* belongs to the family Lamiaceae and is related to lavender and rosemary.

It occurs naturally on granite outcrops in the uplands of the New England region of New South Wales, within 50 km of Torrington, notably near Bismuth, Silent Grove and Tungsten. Here the upright, sticky-leaved shrub is found growing aplenty among huge rock outcrops in association with a host of other flowering shrubs. Usually it grows to 1 m in height and may reach 2 m in rock crevices.



The species forms an attractive bushy shrub in cultivation; the crowded greyish foliage contrasting well with the purplish flowers. The leaves are terete (cylindrical) up to 2 cm long, they taper at the end and sometimes have one or two lateral lobes. They are greyish, have a distinct smell of turpentine and are arranged in opposite pairs along the stems.

The five-lobed flowers have a flattened, funnel shape and are 2.5 cm wide with the style protruding. They appear in September and the colour can vary from pale violet to royal purple¹ with the throat of the flower being darker.

P. teretifolia is propagated from semi-hardwood cuttings, 5–10 cm long, treated with a hormone solution of 500 ppm IBA and 500 ppm NAA. They should form roots in two to six weeks. For plants intended for heavy soils, grafting on to a small form of *P. lasianthos* is recommended. *Growing Native Plants No. 7* provides more detailed information on grafting techniques.

In cultivation the shrub grows well, preferring a well-drained soil. This may be achieved by raising the existing soil level by at least 30 cm using mounds or retaining walls. *P. teretifolia* will tolerate moderate shade to full sun and is frost-hardy. Tip pruning after flowering and the addition of an NPK fertiliser in late spring and early summer will increase vigour and promote greater flowering.

Two specimens planted at the Gardens in 1961 have grown to 1.7 m in height and 2 m in width. They are not grafted plants and are growing in heavy soil in Sections 33 and 152. A very similar species, *P. staurophylla*, can be seen in the Lamiaceae sections of the Gardens.

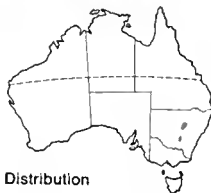
The only recorded problem with *P. teretifolia* is attack from soil borne fungi, like *Phytophthora cinnamomi*, which infect most *Prostanthera* species. This problem can be avoided by grafting susceptible plants on to resistant root-stocks.

Stuart Donaldson

¹ RHS Colour Chart, 1966: purple group 77A, D.

Prostanthera teretifolia: *Prostanthera* — from the Greek, prostheke, an appendage and antheros, anther, referring to the spur-like appendage to the anthers; *teretifolia* — from the Latin, teres, rounded and folium, leaf, referring to the cylindrical leaf of this species.

PHEBALIUM SQUAMULOSUM subsp. PARVIFOLIUM



Distribution

Phebalium squamulosum subsp. *parvifolium*:
Phebalium — said to be from the Greek, *phibaleos*, a kind of fig from *Phibalis* — the name was thought to refer to a myrtle and so (mis-)applied to this genus;
squamulosum — from the Latin, covered with small scales; *parvifolium* — from the Latin, *parvus*, small and *folium*, leaf.

Phebalium squamulosum subsp. *parvifolium* is a small shrub belonging to the family Rutaceae and is one of ten subspecies all of which occur in eastern Australia. It is not common in cultivation but has many attributes which make it useful as a garden subject.

At maturity it is a compact rounded shrub up to 1 m high and 1 m wide with some tendency to twiggy growth. The leaves are small and narrow, 5–8 mm long and 1 mm wide, with glossy, dark green upper surfaces and smooth, pale lower surfaces.

In Canberra the shrub flowers prolifically in October and early November with clusters of tiny, pale yellow¹ five-petalled flowers at the ends of the branchlets. The pale yellow stamens protrude beyond the petals giving the flowers a feathery appearance. Unlike *Boronia* and *Eriostemon*, related genera in the family Rutaceae, it has no distinctive flower or foliage perfume.

The natural occurrence of this plant is on the semi-arid central western slopes and plains of New South Wales around Ard-





Phebalium squamulosum subsp. *parvifolium*

lethan, West Wyalong and as far north as Nymagee. The soils are sandy red earths, which are mildly acid at the surface changing to neutral or slightly alkaline with depth. The plant grows in mallee communities together with shrubs such as the red-flowering *Prostanthera aspalathoides*. Mean annual rainfall for the area ranges from 300 to 500 mm.

In the Australian National Botanic Gardens this subspecies is growing in a variety of situations. Best growth rates have been achieved in the rockery where a three-year-old plant has reached 60 cm in height and is 60 cm wide, growing in a mix of equal proportions of sand and peat and receiving regular watering. However, some leaf yellowing and drop has been observed suggesting that the relatively high applications of moisture and high peat content of the mix may not be conducive to longevity. Elsewhere in the Gardens on unimproved soils and with less regular watering growth rates are somewhat slower but the plants retain a robust appearance. In the mallee section sand and a light dressing of lime have been added to the soil with no detrimental effect on the growth of the plant.

In a Canberra home garden the plant is reported to have reached 1 m in height and 1 m in width after eight years, growing in a sheltered position with half sun. The soil had a high clay content and little watering.

While being reasonably adaptable in cultivation, *P. squamulosum* subsp. *parvifolium* prefers a well-drained soil in a relatively dry site with a slightly acid to neutral pH. These preferences reflect the plant's natural habitat.

This subspecies is frost-hardy and a position in full sun or half shade is suitable as the shrub flowers well in either location.

Although it has a neat, compact and rounded shape in its natural environment, pruning at flowering, or soon after, keeps the shrub dense and lessens the tendency to twiggy.

The only pest reported is scale which can usually be pruned out or sprayed with a mixture of Malathion® and white oil at the crawler stage in spring.

Propagation is by cuttings taken after flowering in late spring and struck in washed river sand. The benefits of using hormones have not yet been established for this plant.

The compact size and habit of this *Phebalium*, together with its pale yellow spring flowers, make it a very useful plant in any garden. It can be planted in low shrub borders, in front of larger shrubs, as a rockery specimen, or in association with mallee vegetation and other small trees. Its fine textured foliage provides a contrast with other bolder shrubs.

Keith Bailey

¹ RHS Colour Chart, 1966: yellow group 4A.

PANDOREA PANDORANA 'GOLDEN RAIN'

Pandorea pandorana, the wonga-wonga vine, is a member of the family Bignoniaceae. It is a vigorous woody climber found over an extensive area of eastern Australia in many differing environments. While more usually associated with moist forest habitats, it is also found in sandy soils close to the coast, in richer loams of volcanic origin, rocky situations in drier areas, and rainforest verges. It is often a persistent species in disturbed or cleared areas.

In forest conditions the plant may be difficult to see. It grows rapidly into the canopy and quite often the only indication of its presence will be liana vines reaching into the canopy and, during spring, the fallen flowers littering the forest floor. In more open forests it is a prominent species scrambling through the undershrubs. The leaves are easily distinguished, being pinnate and very glossy. An individual leaf consists of from five to nine leaflets that are ovate in shape and from 7 to 8 cm long.

In spring the massed tubular flowers are very conspicuous. They can vary from white or cream to brown and often have maroon or purple striations in the throat of each blossom.

Seed is formed in a pod-like capsule from 4 to 7 cm long. The capsule opens to reveal copious quantities of flattened seeds, each one with a membranous, encircling 'wing'.

The original selection of *P. pandorana* 'Golden Rain' was made by the Gardens from a naturally occurring plant near Kempsey in New South Wales in 1967. The cultivar name 'Golden Rain' refers to the golden-brown¹ pendulous inflorescences. This cultivar will tolerate light frosts but could not be regarded as frost-hardy. If grown in cold environments it would require some protection, either by careful siting in protected positions near buildings or under a protecting plant canopy. It would be difficult to establish in 'frost hollows' where cold winter air has a tendency to pool. The

seeds of this cultivar germinate freely and many adventitious seedlings have appeared at the Gardens. Although plants can be raised from seed, this form of propagation will not guarantee flower colour. To retain the characteristics of 'Golden Rain', or for that matter any other desired colour form, vegetative propagation must be used. Tip cuttings of medium-wood material are suitable.

Though found naturally in a wide range of environments, cultivation at the Gardens has shown that *P. pandorana* 'Golden Rain', like other forms of the species, performs best in richer soils with some year-round moisture. Soils should not dry out nor should the plants be subjected to extensive soil moisture fluctuations. Plants develop to their full potential in semi-shaded situations. It is an excellent species to use on fences, pergolas or trellises. If desired for use as a climber on trees, some care must be exercised due to the constrictive liana habit as this may inhibit or strangle younger trees as they develop.

P. pandorana 'Golden Rain' has proved to be pest free at the Australian National Botanic Gardens.

Geoff Butler

¹ RHS Colour Chart, 1966: yellow-orange group 14A.



Pandorea pandorana: *Pandorea* — relating to the legend of Pandora's box, of which Spach (the author of the name) is said to have been reminded by the fruits. Another suggestion is that the original species was connected with a plague of insects on Norfolk Island; *pandorana* — from Pandora and the Latin suffix, -anus, relating to.

VERONICA FORMOSA



Veronica formosa, a member of the family Scrophulariaceae, is endemic to Tasmania and grows on rocky hillsides from sea-level to altitudes of about 1200 m. It has been sighted at Port Dalrymple on the north-east coast and on Mt Wellington. The species was previously known as *Hebe formosa*.

The plant is a perennial shrub ranging in height from 0.5 to 2 m depending on its growing conditions. The glabrous, dark-green leaves distinguish this species when it is not in flower. They are thickish and small, 7–15 mm long, elliptical to lanceolate and are arranged in close-set, opposite pairs with the bases of each pair fused across the stem. In late spring and early summer it blooms profusely and is covered with many small flowers varying in colour from pale lilac to violet blue. These typical *Veronica* flowers have an unequal four-lobed corolla with two exerted stamens and are carried in racemes which are numerous in the axils of the upper leaves, forming a leafy branched inflorescence. The fruit is a small, ovoid-oblong, bilocular capsule with the basal half inflated.

V. formosa will grow in most soils. Although it flowers better in the sun, it will tolerate shade. In its natural environment it is regarded as being frost-hardy and can withstand frosts up to -7°C . The species is ideal as a rockery plant as it will spread over rocks and reaches a height of 60 to 70 cm. *V. formosa* responds well to pruning as it tends to become lanky. In winter the old stems should be cut back to make the plant more compact.

V. formosa is best propagated by cuttings taken in late January. They take about six weeks to strike. There are many specimens of this attractive species growing in various locations in the Australian National Botanic Gardens.

Tim Mulcahy

¹ RHS Colour Chart, 1966: violet-blue group 98B.



Veronica formosa: *Veronica* — from mediaeval Latin, supposedly a corruption of the Latin, *vera icon*, true image, referring to the image of Christ imprinted on the cloth with which St Veronica wiped his face — the name subsequently assumed to be in honour of the saint herself; *formosa* — from the Latin, beautiful or handsome.

INDEX

INDEX

to Numbers 11, 12 and 13.
(A cumulative index to
Numbers 1-10 is included in
Number 10).

AUTHORSHIP

Articles for *Growing Native
Plants* are supplied by trained
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COLOUR REFERENCES

Colours are identified for the
benefit of overseas readers
according to the 1966 edition
of the colour charts of the
Royal Horticultural Society,
London.

Abelmoschus moschatus
subsp. *tuberosus*, 255, 256
Acacia, 276
Acacia flexifolia, 280
Acacia gunnii, 255
Acacia bug, 277
Acetosella vulgaris complex,
see *Rumex acetosella*
Actinotus hellianthi, 255, 260
Ajuga australis, 255
Anigozanthos spp., 255
Aphanopetalum clematideum,
282
A. resinosum, 284, 299
Aphids, 275, 276
Armillaria, 274
Artanema fimbriatum, 255
Arthropodium milleflorum,
255
Australian hollyhock, 275
Austromyrtus, 281
A. dulcis, 281

Bacteria, 275, 279
Baeckea gunniana, 255
B. ramosissima, 255, 307
B. virgata, 265
B. virgata 'Howie's Feather-
tips', 265
Banksia dryandroides, 255
B. spp., 255
Bauera capitata, 255
Beetles, 277
Beetle, Christmas, 277, Back
Cover No. 12
Bent-leaf wattle, 280
Billardiera longiflora, 299
B. ringens, 299
B. scandens, 299
Black-eyed Susan, 258
Blancoa canescens, 255
Blandfordia cunninghamii, 258
B. spp., 255
Blechnum pennä-marina, 256
Bloodroot, 257
Bluebell, Australian, 258
Blue devil, 260
Borers, 276
Boronia serrulata, 267
B. spp., 256
Brachycome spp., 256
Brunonia australis, 256
Bugle, red, 255
Bugs, sucking, 277
Bulbine bulbosa, 256
Butterfly, 276, 277

Callistemon, 276, 282
C. viminalis, 282
C. viminalis 'Captain Cook',
282
C. viminalis 'Dawson River
Weeper', 282
C. viminalis 'Hannah Ray', 282
C. viminalis 'Hen Camp
Creek', 282
C. viminalis 'Prolific', 282
C. viminalis 'Rose Opal', 282
C. viminalis 'Wild River', 282
Calocephalus brownii, 254,
256
Calostemma purpureum, 256
Canberra grass, 261
Carex, 259
Cassyltha spp., 275
Casuarina, 276
Caterpillars, webbing, 278
Caterpillars, 276, 277
Celmisia astelii, 256
Ceratopetalum gummiferum,
282
Cheiranthra linearis, 256
Chemical injury, 279
Chocolate lily, 257
Chorizema cordatum, 269
C. spp. 256

Christmas Beetle, 277, Back
Cover No. 12
Christmas bells, 255
Cissus antarctica, 305
Clematis aristata, 300
C. microphylla, 300
Clianthus formosus, 257
Climbing plants, 298
Conostylis spp., 257
Craspedia spp., 257
Crinum spp., 257
Curcuma australasica, 257
Cushion Bush, 256
Cyperus alterniflorus, 259
C. lucidus, 259
Cyphanthera albicans subsp.
notabilis, 308

Dampiera spp., 257
Damping-off, 274
Darwinia fascicularis, 268
D. fascicularis subsp.
fascicularis, 268
D. fascicularis subsp.
oligantha, 268
D. oldfieldii, 255
D. spp., 257
D. taxifolia, 268
Dendrobium speciosum, 257
Dianella spp., 257
Dichopogon fimbriatus, 257
Diplarrena moraea, 257
Diselma archeri, 263, 264
Dodder, 275
Doryanthes excelsa, Front
Cover No. 12, 294
Dracophyllum spp., 257
Drimys purpurascens, 293
Dryandra spp., 257

Early Nancy, 258
Elderberry panax, 291
Enchylaena fomentosa, 309
Epacris reclinata, 258
E. spp., 257
Eremophila spp., 257
Eryngium rostratum, 260
Eucalyptus parvifolia, 292
Euryclis spp., 257
Eustrephus latifolius, 300,
Front Cover No. 13

Fasciation, 279
Feather flowers, 258
Fertiliser, 279
Flame pea, heart-leaf, 269
Flannel flower, Sydney, 255,
260
Frankenia spp., 257
Fringed lily, 258
Frost, 279
Fungi, 279
Fungus diseases, 274

Gahnia, 259
Galls, 275, 279
Garland lily, 256
Geitonoplesium cymosum,
300
Glischrocaryon spp., 257
Goodenia spp., 257
Grevillea buxifolia, 287
G. confertifolia, 310
G. 'Evelyn's Coronet', 287
G. fasciculata, 257
G. flexuosa, 257
G. lavandulacea, 287
G. nana, 257
G. synapheae, 257
G. trinervis, 257
G. willisii, 287

Haemodorum spp., 257
Hakea, 274, 286

H. bucculenta, 286
H. myrtoides, 257
Halgania cyanea, 252, 257
Hardenbergie comptoniana,
300
H. violacea, 300
H. violacea 'Happy Wanderer',
301
Helichrysum apiculatum, 257
H. apiculatum (decumbent
form), 313
H. bracteatum 'Diamond
Head' 254
H. scorpioides, 254
H. spp., 257
Hibbertia dentata, 262
H. pedunculata, 262
H. perfoliata, 262
H. spp., 257, 262
Honey fungus, 274
Hoya australis, 301, 305
H. macgillivrayi, 301, 314

Indoor plants, 304
Insect pests, 276, 279
Iris, native, 258
Isotoma anethifolia, 254

Jasminum aemulum, 297, 301
J. lineare, 301
Johnsonia lupulina, 257

Kangaroo apple, 290
Kangaroo paw, black, 258
Kangaroo paws, 255
Kennedia beckxiana, 301
K. coccinea, 302, Back Cover
No. 13
K. macrophylla, 302
K. nigricans, 302
K. retrorsa, 302
K. rubicunda, 302
Knapel, two-flowered, 261
Kunzea affinis, 315

Lagenaria siceraria, 304
Lavatera plebeia, 275
Lealspot fungi, 274
Lechenaultia biloba, Front
Cover No. 11, 271
L. biloba 'White Flash', 271
Lechenaultia blue, 271
Lechenaultia formosa, 253
L. spp., 257
Leptospermum spp., 278
Lerps, 277
Lomandra longifolia, 255
L. spp., 257
Luffa cylindrica, 304
Lygodium reticulatum, 305
Lythrum salicaria, 257

Macropidia fuliginosa, 258
Macrozamia spp., 258
Mazus pumilio, Contents page
No. 11, 258
Mechanical injury, 279
Melaleuca, 289
M. spathulata, 289
M. spp., 278
Mentha diemenica, 270
Microcachrys tetragona, 263,
264
Microstrobos ilizgeraldii, 258
Mildew powdery, 274
Mineral deficiency, 279
Mistletoe, 275
Mites, 277
Molineria recurvata, 258
Moths, 277
Mould, sooty, 277
Muehlenbeckia adpressa, 302
Myoporum bateae, 311
M. floribundum, 311, 312

Nutrition, 279
Nematolepis phebalioides,
 317

Olearia erubescens, 316
Orobanche sp., 275
Orthrosanthus spp., 258
Oxalis corniculata, 261

Pandorea jasminoides, 302
P. pandorana, 302
P. pandorana 'Golden Rain',
 302, 321
Parahebe perfoliata, 254
P. spp., 258
 Parasites, 275
Parsonia eucalyptophylla,
 303
P. straminea, 303
Passiflora cinnabarina, 303
P. edulis, 285
P. herbertiana, 303
Patersonia spp., 258
Pentachondra pumila, 258
Phebalium coxii, 273, 285
P. squamulosum subsp.
parvifolium, 319
Phytophthora, 275
Phytophthora cinnamomi, 262,
 286
 Pine, creeping, 263
Pityrodia terminalis, 253
Platytheca verticillata, 258
Polyscias sambucifolia, 291
Pothos longipes, 305
 Powdery mildew, 274
Prostanthera teretifolia, 318
P. staurophylla, 318
Pseuderanthemum variabile,
 258
 Psyllids, 277
Ptilotus spp., 258
Pultenaea pedunculata, 258
P. spp., 258

Ranunculus lappaceus, 251
R. spp., 258
 Red spider, 277
Rhaphidophora australasica,
 305
Rhizoctonia spp., 261
 Rockery, construction of, 253
 Rockery, location of, 251
 Rockery, maintenance of, 254
 Rockery, materials and design
 of, 251
 Rockery, planting and
 selection in, 254
 Rock lily, 257
 Root rot, 275
 Rose, native, 267
Rumex acetosella, 261
 Rust, 275

Sawfly, 277
Scaevola spp., 258
 Scale, 277
Scirpus, 259
Scleranthus biflorus, Back
 Cover No. 11, 261
Senecio lautus subsp.
maritimus, 275
 Snow daisy, 256
Solanum, 290
Solanum laciniatum, 290
Sollya heterophylla, 303
 Sooty mould, 277
 Sorrel, sheep, 261
 Southern Cross, 258
Sowerbaea spp., 258
Stackhousia spathulata, 257
S. spp., 258
 Sturt's desert pea, 257
Stylidium spp., 258
 Sucking insects, 277
 Sun scorch, 279
Swainsona galegitolia, 254
S. spp., 258

Tasmania purpurascens, 293
Tecomathe hillii, 304
 Temperature, 279
Tetradlea spp., 258
 Thrips, 277
Thysanotus spp., 258
Tieghemopanax
sambucifolius, 291
 Trigger plant, 258

Vanilla lily, 258
Veronica formosa, 322
Verticordia spp., 258
Viola betonicifolia, 266
V. hederacea, 254
 Viruses, 275, 279

Wahlenbergia spp., 258
W. stricta, 256
 Webbing caterpillars, 278
 Weedicide, 279
Wurmbea dioica, 258

Xanthosia rotundifolia, 258



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